

REMARKS

Claims 2-4 and 8-29 are all the claims pending in the application. New claims 13-29 have been added based on, for example, the original claims, pages 6-9, and the Examples in the present specification.

Entry of the above amendments is respectfully requested.

I. Rejection of Claims 2-4 and 8-12 under 35 U.S.C. § 103(a)

Claims 2-4 and 8-12 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sakuyama (JP 2002-334895) in view of Amita et al. (US 2002/0046627).

Applicants respectfully traverse the rejection for the reasons of record and for the following reasons.

The Examiner asserts that Sakuyama discloses applying a solder precipitating composition. However, Sakuyama does not disclose a solder precipitation composition for the reasons previously discussed and argued. Sakuyama discloses a ***pewter paste***, which is melted to form a layer. Pewter is an ***alloy*** of tin and lead (and may contain some copper), and pewter paste does not contain tin power and a complex, which a complex of copper ions and at least an aryl phosphine, alkyl phosphine or azole(e.g., Ag complex of tetrakis(triphenylphosphine)methanesulfonic acid) or a tin powder and a salt of lead, copper or silver (e.g., lead naphthenate), as recited in claims 8-9 and 13-16.

In addition, the Examiner asserts that “the solder precipitating composition further comprises at least one member selected from the group consisting of aryl phosphines, alkyl phosphines and azoles”. However, it is not simply that the claimed solder precipitating composition comprises an aryl phosphine, an alkyl phosphine or an azole, the aryl phosphine, alkyl phosphine or azole is present as part of a complex formed with copper or silver ions.

Sakuyama, as acknowledged by the Examiner, does not disclose an aryl phosphine, an

alkyl phosphine or an azole, and thus, does not disclose the claimed complex. Not only does Sakuyama fail to disclose the complex, Amita also does not disclose such complex. Sakuyama and Amita also fail to disclose a salt of lead, copper or silver. Although Sakuyama discloses that the paste can Sn, Pb, Ag, Bi, Cu, In, and Zn, etc., there is no disclosure regarding the addition of Sn, Pb, Ag, Bi, Cu, In, or Zn in a salt form. Similarly, Amita discloses the use of Sn-Ag and Sn-Cu systems, however, does not disclose the claimed complex or claimed salt of lead, copper or silver.

Further, a solder paste and the claimed solder precipitating composition are different. In contrast to conventional solder paste (e.g., Sakuyama and Amita), in the claimed solder precipitating composition, the solder alloy in the present invention is chemically precipitated through a substitution reaction of the tin powder with the complex of silver/copper ions and aryl phosphine/alkyl phosphine/azole or salt of lead, copper or silver.

New independent claims 13 and 15 specifically recite that the tin powder reacts with a silver or copper complex of at least one member selected from the group consisting of aryl phosphines, alkyl phosphines and azoles or with a salt of at least one metal selected from the group consisting of lead, copper and silver. In addition, new independent claims 14 and 16 recite kneading the solder precipitation composition comprising tin powder and a silver or copper complex of at least one member selected from the group consisting of aryl phosphines, alkyl phosphines and azoles or a salt of at least one metal selected from the group consisting of lead, copper and silver.

For at least the above reasons, it is respectfully submitted that claims 8-9 and 13-16 are patentable over the cited art because Sakuyama alone, or in combination with Amita, fail to disclose the at least the claimed solder precipitating composition.

In addition, claims 2-4, 10-12 and 17-29 depend from claim 8 or 9, and thus, it is respectfully submitted that these claims are patentable for at least the same reasons as claim 8 or 9.

Withdrawal of the above rejection is respectfully requested.

II. Conclusion

For the foregoing reasons, reconsideration and allowance of claims 2-4 and 8-29 is respectfully requested.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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